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ABSTRACT

A study examined trends in enrollment in further education (FE) in Liverpool. Because the primary objective of the study was to identify possible factors that may influence the scale and specific strategies of student recruitment efforts, a case study approach was used to examine the FE participation rates and socioeconomic characteristics of Liverpool youths between the ages of 16 and 19. Data from a 1983 statistical analysis of the school attendance of this group of students indicated that although the enrollment rate of this age group in FE may increase slightly as the result of 17+ recruitment and transfer of the adult education centers to the colleges, little improvement in employment or growth in vocational education is likely. By the end of the decade, the enrollment level of full-time equivalent students will have fallen to 62 percent of its 1983 level. The post-19 general and nonvocational sectors appeared to be the greatest sources of potential FE enrollees. Although part-time provision in the vocational sector is becoming increasingly more competitive, data from the study indicated that implementation of a 2-year training program replacing the Youth Training Scheme may increase college-based activities. (MN)

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LIVERPOOL EDUCATION AUTHORITYFURTHER EDUCATION MANAGEMENT AUDIT STUDIES : 1984-85STUDENT ENROLMENT : FORECASTING TRENDS

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LIVERPOOL EDUCATION AUTHORITYFURTHER EDUCATION MANAGEMENT AUDIT STUDIES : 1984-85STUDENT ENROLMENTS : FORECASTING TRENDSPART ONE : BACKGROUNDIntroduction

1. The rationale and the resource base of Further Education provision is drawn from its ability to recruit students. Taken over a period of time enrolment levels have been shown to have demonstrated a number of broad trends. This paper endeavours to identify possible factors that may influence the scale of recruitment, and to consider these as guidelines for forecasting future contexts in which forward planning may be set.

Background

2. Whilst Further Education may be a mandatory service participation is non-compulsory and it is therefore market-based in that it has to recruit volunteer students. It is in this context that Yates proposed that

"an important task of the administrator is to be able to forecast as accurately as possible the effects both of events he cannot influence but also events which he or his employers can choose to happen if they wish" 1

In FE, however, it would often appear that short-run, adaptive decision-making is the order of the day, forecasting often being limited to one-off positions relating to individual courses.

3. In approaching the use of long-term forecasting Prowle has argued that

"the alternative to long-term planning is, of course, to do nothing and muddle through" 2

In support of his thesis in favour of longer term planning he has put forward the following benefits:

- (i) the reduction of unknowns
- (ii) the provision of a framework for decision-making
- (iii) avoidance of abortive work and unnecessary costs
- (iv) development of efficient use of resources over time
- (v) assistance in preparation of detailed programmes, and
- (vi) guidance for planned changes in non-financial resources, e.g. staffing

The difficulties and uncertainties are clearly legion and make forecasting demand and response in FE problematic but given the balance of advantages over disadvantages there is good cause for endeavouring to use the best information available.

4. Forecasting, particularly in the medium and longer term, is clearly an art form rather than a science, though techniques such as extrapolation and morphological analysis may be of assistance. It is, nevertheless, possible to explore what may be deemed significant characteristics, to be sensitive to change and to explore possible key influences. There is a clear need to review realistic forecasts of the levels of support and of resources available, together with resources required in the long-term future and Prowle goes on to offer the following catalogue of factors:

<u>Factors Influencing Resource Availability and Resource Requirements</u>	
<u>Resource Availability</u>	<u>Resource Requirements</u>
(a) Total public sector resources (i) National economic situation (ii) Political influences (b) Distribution in the public sector (i) Demographic factors (ii) Local economic situation (iii) Political factors	(i) Demographic factors (ii) Economic factors - national (iii) Economic factors - local (iv) Technological factors (v) Social factors

5. Data and informed opinion specifically relating to participation in Non-Advanced FE in terms of the type of factors listed above is more often marked by its absence than its availability. Where it exists it is often fragmentary and anecdotal rather than Delphic in its nature. The recent debate centring around the DES forecasts of student numbers entering higher education³ has, however, served to draw attention to the role of forecasting as well as to its attendant difficulties.⁴ NAFE, however, operates in a more open and competitive environment which poses both greater difficulties but also, it can be argued, a greater necessity to look ahead.
6. In his brief outline forecasting in FE Yates offered the following eight essential steps to forward planning which provide a framework for exploring contextual issues:
 - (i) *What has been happening so far, qualitatively and quantitatively?*
 - (ii) *What are the factors which have influenced the past result?*

- (iii) *What are the factors which could influence the result which we are trying to forecast?*
- (iv) *Making various sets of assumptions about these factors, what is the likely result?*
- (v) *Some forecasts of the future can be influenced by actions we take. If we have such influence, we must then ask what are our aims and what result would we like to achieve?*
- (vi) *What actions should be taken to achieve each of these aims and what would they cost (for example in time and money)?*
- (vii) *In the light of our resources and freedom of action we must then choose which actions we shall attempt to achieve the result we desire.*
- (viii) *Lastly, we review in due course the accuracy of our forecast and use the information to improve the earlier stages in our future forecasts."*⁵

7. Educational forecasting does not tend to carry with it an enviable reputation and track record but the alternative of adopting ad hocery as the basis for managing resources in a period of rapid change would not seem viable. Whilst the catalogue of stages described above is daunting, it would seem possible that some start may be made through the identification of known characteristics and influences which may possibly be significant. Fulton, for example, succinctly indicates that:

*"90% (of full-time or sandwich students) on non-advanced courses at major establishments were aged 20 or younger in 1982"*⁶

One area for the focus of attention can therefore be identified.

8. Analysis by the Department of Education and Science points to statistical relationships between participation rates at 16+ and a limited range of socio-economic factors. This paper endeavours to offer a number of such possible starting points and influences which may be explored in a local context as precursors to the stages of forecasting outlined above. DES Statistical Bulletin 12/83 is then used as a case study which draws together both available data and observation in relation to the current key age group of students.

PART TWO : POSSIBLE INFLUENCES ON ENROLMENTS

Introduction

9. In the steps offered by Yates the starting point is an historical perspective, drawing upon qualitative as well as quantitative observations. Whilst there is a substantial volume of data, primarily provided by the FESR returns made each year by colleges, there is little evidence as to its reliability as analyses or use in support

of its development as management information at the local level. National studies have pointed to a steady rise through the 1970s in the Age Participation Index by 16 to 18 year olds.⁷ That position has tended to stabilise in recent years at around 10 per cent of young people undertaking full-time or sandwich study in Non-Advanced FE.

10. This pattern of rising participation levels together with the increase in the overall size of the key age cohort has sustained levels of growth in overall enrolments. It has, however, also tended to mask a significant shift in the modes of attendance and their related types of course. The strength of the FE system has been said to be in its vocational character and strong links with industry yet by May 1977 it was clear that "*industry has ditched day release*".⁸ The Department of Employment Gazette demonstrated clearly how, prior to the Youth Opportunities Programme and the Youth Training Scheme the former core of NAFE had been severely eroded. This trend has continued and shows no significant signs of reversal.
11. The rise in full-time participation from 7.9 per cent in 1975/76 to 10.6 per cent by 1981-82 has clearly been important as this group form the major element in colleges. However, as "*Competence and Competition*" has demonstrated levels in the UK are lower than in other key developed countries.⁹ The position in the United Kingdom has, however, changed very significantly in recent years with the rapid development of the YOP and now the Youth Training Scheme. The options open to young people at sixteen have changed from a job now or deferred employment following further study. The traditional link between staying on and better job prospects is perceived as being weaker. YTS both pays a training allowance now and for the majority of places across the country gives immediate links with potential employers.
12. There has been little qualitative comment to date on FE provision though the recent HMI reports on day release have given notional views of a declining area of activity.¹⁰ The relative freedom of availability of resources until recent years, together with the continued rise in the size of the key age group, has not brought market forces into any significant focus. It is difficult, therefore, to extrapolate to any substantive degree of detail from the past into the changing times ahead. The MacFarlane Report, however, provided a useful classification of client groups and provision for 16 to 19 year olds as identified in 1981.¹¹

Client Groups : Estimates of Size and Provision : 1981			
Client Group	Potential Numbers (000s)	Provision then Made (000s)	Main Types of Provision (then)
A. Entry to employment without part-time education	200-3000	5	UVP
B. Employment + PT ed. leading to recognised quals.	500	280	Operatives courses e.g. ITB/MSC
C. Without work or prospects of work	200-300	190	YOP
D. Staying on to proceed to higher education	400	335	Full-time to A level
E. Studying for vocational quals. and work at 18+	200	140	CGLI, BEC, TEC, RSA, etc.
F. In general/pre-voc. education	200	135	A and O level + Foundation courses
G. In remedial education	50	5	Basic Education

13. The key growth areas identified in relation to groups A, B and C are represented within the Youth Training Scheme, together with provision for Category G. Through the Christmas Guarantee it is now possible to recognise that a training place has been made available to all school leavers not in full-time study or employment. Whilst the MacFarlane Report also pointed to potential for growth in traditional areas of FE and sixth-form activity, these are now being catered for in numerical terms at least through alternative provision for 16 year olds.
14. Such analysis as has been undertaken of factors influencing previous participation patterns has served to highlight the centrality of release from employment for part-time participation and socio-economic factors for full-time students. The latter is explored in greater detail through the findings of the DES research later in this paper. Not all students in FE, however, fall within the 16-19 age group, now or in the future, and consideration needs to be given to other areas of recruitment. Similarly there can be assumed to be some measure of working relationship between levels of resource input/availability and activity. Mitigation through increased efficiency in a period of restraint on public expenditure is already being assumed in national planning.¹² Whilst interactions between resource requirements/demand and supply are not static it is possible to explore a range of what may be influential dimensions.

Resource Availability

15. In the analysis of factors influencing resource supply referred to earlier Prowle identified two key dimensions, the totality of public sector resources and influences on their distribution. Whilst long-term economic forecasting is clearly difficult it is perhaps not unreasonable to assume that in the medium term the best scenario is one of limited growth and competing demands. If the political rhetoric is put to one side there would appear to be little in recent years to point to major differences in practice between the political parties with regards to Non-Advanced FE. It may not therefore be too unrealistic to extrapolate a continuum of the pattern experienced over the last decade, the most significant recent change being the effects of rate-capping and penalty which may be some uniformity of pressure on local government expenditure.
16. Distribution across public sector services can however be expected to change, if only because of demographic shifts. Movement of resources from the education of 16-19 year olds in line with falling rolls will be matched by the continued growth of expenditure on social security benefits and local authority provision for the increasing numbers of elderly adults and people in care. The local economic and political situation will clearly continue to be of significance, influencing both resources through the industrial rate and perceptions of the vocational and social worth of FE. Buoyancy in the 'Golden Triangle' and the micro-chip industries can be expected to increasingly contrast with areas of high and perhaps endemic youth unemployment. Stated public and political perceptions of the role and worth of work-related FE are rarely translated directly and immediately into resource availability. It is, however, sometimes possible to identify general expectations and attitudes over a period of time.
17. The growing stock of information about efficiency levels and costs in FE point on the one hand to wide variations between colleges and LEAs, but to no clear relationship with performance on the other. There is, therefore, a growing questioning of resource needs in NAFE as well as in Advanced FE. The shift towards allocations based on units of resources in the national service has not been matched at the local level. However, public expenditure plans and such key areas of supply as the Rate Support Grant and MSC/ITB fees are increasingly looking to rises in efficiency and falling costs. It would seem likely therefore in looking ahead to the medium term that the pattern of recent years until at least continue if not quicken. General constraints on public expenditure may have particular effects on FE through a combination of expected rises in efficiency, shifts in employment, constraints on general levels of local government spending and movement of resources from 16 to 19 provision to other areas.

Resource Requirements/Demand

18. As the growing debate about relationships between resource efficiency and educational effectiveness are beginning to illustrate, there is no unequivocal evidence provided by current practices but rather

indicators as to scope for change. Over and above the debate as to how far reductions in expenditure or increase in supply can be achieved by varying the base unit of resource, there are other dimensions relating to demands and levels of student support. Reference has been made on several occasions to the significance of demographic changes and the impact of falling rolls, the scale of which in terms of Liverpool is substantial. The 16 year old age cohort, for example, will fall in size from 9,480 in 1978 to 4,910 by 1993, ie. reduction to almost half of its former size.

19. It can be counter-argued, however, that participation in FE in the key 16-19 year old age group offers scope for expansion by raising the Age Participation Index. This has been achieved to some limited degree through the 1970s as was indicated by the national rise in full-time levels from 7.9 to 10.6 per cent. How far this trend can be expected to continue now that the Youth Training Scheme has been introduced is a matter of surmise. It is possible, though there would not appear to be any substantive evidence in either direction, that the trend will be away from education to training. How far a year in YTS may be only a deferrment by some of their continued education is a further area of uncertainty. The MacFarlane analysis of 1981 suggested some potential for continued growth but it pre-dated the current pattern of training. Unless there are further radical structural changes shifts may be marginal rather than dramatic in their scale and character.
20. Further education provision is not, however, limited to the 16 to 19 year old population and as with HE arguments can be advanced for growth in the provision of post-initial opportunities. Analysis of the FESR returns for Liverpool's colleges indicates, however, that almost two-thirds of the Full-Time equivalent student level falls within the YTS/sixth form age range.¹³ Colleges have not as yet, therefore, made substantial in-roads into the adult sector. The DES Report on Education No. 100 recognised that in the HE sector forecasts differ as to projected levels of take-up by mature adults. The differences of scale at local level are not, however, likely to be of major significance. Some emphasis has also been placed on adult retraining as potential for growth but in the case of TOPS provision there has been a substantial decline and the level of activity with adults in employment is little more than nominal. The third dimension, that of general or non-vocational provision has as yet to be extensively explored but the EEC funded initiatives are designed to provide major pump-priming in key areas for groups with traditionally low levels of participation.
21. The debate on participation patterns and levels has been more extensively argued in the higher education sector than in NAFE. Reference has, however, already been made to feasible changes in the participation indices and possible growth in terms of mature students. In addition claims have been put forward for maintenance of the birth rate amongst social Class I and II families together with upward social mobility between birth and 18 as arguments for mitigating against the effects of falling rolls. History has further tended to indicate that

"The higher the socio-economic status of the father's occupation the more likely it is that a fifth former will stay on at school after the end of compulsory education." ¹⁴

It is not clear, however, how far this pattern relates to FE in Liverpool, or is influenced by job expectations or competing types of provision.

22. The traditional vocational strength of the Non-Advanced sector is clearly being influenced by technological change and the shift from employment to unemployment amongst key groups. Jenkins and Sherman, in reviewing the future of work, recognised relationships between the new technologies and the size of the work but did not see it as being critical. They argued

"Remain as we are, reject the new technologies and we face unemployment of up to 5.5 million by the end of the century. Embrace the new technologies, accept the challenge and we end up with unemployment of about 5 million." 15

Of greater significance for FE after the period of transition and its need for re-training is the de-skilling element in relation to jobs traditionally serviced by Further Education.

23. A number of forecasts have been published which outline the future shape of the labour force nationally. Their differences tend to be ones of pace and degree rather than fundamental variations, pointing as they do to small increases in some areas of professional employment but with major decreases in semi-skilled and craft related jobs. For example, the Institute of Employment Research at Warwick published the following predictions in 1983.

EMPLOYMENT TRENDS 1980-1990		
Category	1980 (000s)	1980-1990 + or -%
Managers, administrators	2,129	+ 5.7
Education professions	980	- 4.3
Health professions	986	+ 9.4
Other professions	562	+ 11.5
Literary, artistic, sport	447	+ 26.0
Engineers, scientists	576	+ 14.3
Technicians, draughtsmen	601	+ 12.5
Clerical	4,056	+ 0.5
Sales	1,417	- 5.6
Supervisors, Foremen	104	- 10.0
Engineering Craftsmen	2,143	- 5.3
Other transferrable craftsmen	907	- 18.0
Non-transferrable craftsmen	675	- 27.4
Skilled operatives	622	- 15.3
Other operatives	4,712	- 18.0
Security occupations	386	+ 25.0
Personal Service occupations	2,932	- 3.0
Other occupations	789	- 38.1
Non-manual	11,755	+ 3.8
Manual	13,271	- 12.9
All occupations excluding HM Forces	25,026	- 5.0

24. The heartland of NAFE is already clearly identifying with the impact of the changes implicit in the above table as vocational preparation has mushroomed whilst the traditional bastions are declining. The position is not, however, a simple linear relationship with decline overall, or even with shifts within employment. The combination of time-lag between the production of qualified college leavers and the job market is being exacerbated by the return to unemployment of older generations of skilled workers. Whilst there is no detailed analysis to hand the following relationships between those registered for work and reported vacancies highlights the competitive nature of labour supply and jobs in Liverpool.

UNEMPLOYMENT IN LIVERPOOL : OCCUPATIONAL ANALYSIS			
Occupational Group	Registered Unemployed	Registered Vacancies	U/V Ratio
Agriculture, Forestry & Fishing	106	3	35
Mining and Quarrying	44	0	44
Food, Drink & Tobacco	3,305	19	174
Coal & Petroleum Products	64	0	64
Chemical & Allied Industries	675	9	75
Metal Manufacture	265	0	265
Mechanical Engineering	857	8	107
Instrument Engineering	48	1	48
Electrical Engineering	766	7	109
Shipbuilding & Marine Engineering	487	0	487
Vehicles	1,479	4	370
Metal Goods not elsewhere specified	982	15	66
Textiles	691	4	173
Leather, Leather Goods & Fur	70	1	70
Clothing & Footwear	537	19	28
Bricks, Pottery, Glass, Cement, etc.	164	1	164
Timber & Furniture	766	7	109
Paper, Printing & Publishing	620	9	69
Other Manufacturing Industries	947	7	135
Construction	8,262	113	73
Gas, Electricity & Water	143	3	48
Transport & Communication	4,018	33	122
Distributive Trades	5,227	261	20
Insurance, Banking, Finance & Bus. Services	926	55	17
Professional & Scientific	1,447	224	7
Miscellaneous Services	6,935	838	8
Public Admin. & Defence	2,642	58	46
Unclassified (including never worked)	9,737	--	--
Total	55,040	1,699	27

Changes in registration regulations at Job Centres and data classification preclude historical analyses. Information in this area as elsewhere nevertheless provides starting points from which to pursue significant questions.

General Observations

25. The relationships between supply and demand are clearly complex and multifarious, inter-acting upon each other with changing degrees of dynamic. Perceptions of buoyant support, relevance and value are clearly going to carry greater weight in periods of competition for resources than their opposites.

In years of plenty they may not, however, carry the same critical significance. Fulton, in reviewing Demand, Supply and Access, whilst focussing primarily on entry to HE, argued that on the one hand:

"It is possible to predict that the sharp lines of demographic oscillation may be partly smoothed out when converted into demand rates"

whilst recognising on the other that

"There is every reason to think that young people are strongly influenced by what they believe to be employment and earnings prospects." 16

26. The types of argument put forward by the Royal Society, the Royal Statistical Society and the Association of University Teachers in response to Report on Education Number 99 would not appear to carry the same weight in NAFE as in AFE. Demand from the key age group has to be set in a context of growing competition and near saturation at 16+ with little experience of direct 17+ recruitment.
27. The arguments about differential levels of demographic decline are only likely to reduce and cannot eliminate the impact of falling rolls. In terms of new markets for existing products it can be said that FE, in some parts of the country at least, has been there for some years, testing the market response. Mature entrants tend to be dependent on financial support for major commitments, this only being available to the registered unemployed under the 21 hour rule. In simple quantitative terms 10 to 15 single session students are required to equate to a single full-time student in NAFE. Growth here would have to be exponential, and on a rate not yet seen in this or any other developed country if it were to offset falling rolls to any very significant degree.

Competition

28. Supply and demand needs to be set in context and any consideration of key characteristics in the future can generally be set alongside competition as a growing dimension of the post-compulsory educational scene. Passing reference has been made to four broad strands of provision, namely:

- (i) Pre-vocational education and training
- (ii) Vocational education and training
- (iii) General education
- and (iv) Non-vocational education

Whilst these are rarely discrete entities they do provide broad strands of analysis and comment and are used here as a means of reviewing the open environment in which FE colleges operate.

29. In the provision of pre-vocational education and training at 16+ there has clearly been major developments in recent years and the pattern is still evolving. The Youth Training Scheme is perhaps the most significant element but it is not alone. The focus from the outset has been on work-related training and the euphoria of the FE world of three years ago has quickly dissipated. The primary provision through Mode A contains off-the-job training but the signs are of movement away from colleges to in-house or private agency provision. This is partly on cost grounds but also, it is argued, due to access and relevance. Furthermore, provision under Mode B1 is beginning to generate new types of training institution which may at a future date see expansion of their role through competition in other areas of activity.
30. Secondary schools have for some time recognised that the future of sixth forms is dependent on the "New Sixth Former" who, in another context, is the mainstay of FE as a full-time student. It is as yet little more than surmise as to how far the new CPVE examinations and TVEI type developments will sharpen the competitive edge that is being honed by falling rolls. The expansion by FE some years ago into the traditional general education role of the schools is being matched by vocational courses in sixth forms. BTEC, the RSA and City & Guilds are becoming more commonplace qualifications in schools, particularly in sixth form courses.
31. Work-related education and training is in a state of flux, perhaps best characterised by the Government's White Paper "Training for Jobs". In the short term, action by the Local Authority Associations has led to status quo but plans are to be prepared for the future. The Manpower Services Commission's policy with regard to TOPS and training for stock may or may not be indicative of future strategies. It is clear, however, that views held about relationships between vocational training, job prospects now and short-term trends will be afforded high priorities. Concern expressed at the possibility of longer term changes in regional distribution away from areas of high unemployment remains unanswered. Limited labour mobility at the intermediate skill level in traditional industries may be variable in its effect, it is nevertheless likely that some movement of training opportunities to follow job trends can be expected.
32. Work-related education and training can be broadly divided into two areas in terms of the provision of resources to LEAs, the first being mainstream FE funded by the RSG and local rates, and the second by a combination of rate-borne costs and central funds. The MSC and ITB courses exemplify the latter and have been touched upon above here. The providing LEA is clearly not a free agent but is constrained by partnerships which are changing each year. In the more directly LEA resourced area providing institutions are again subject to external constraints, on the one hand by policy changes by central government relating to the RSG but more directly and obviously by other LEAs through recoupment controls. The permit procedures are increasingly being scrutinised as their costs and spare capacity at home are encouraging feeder LEAs to build trade barriers.

33. The vocational sector does, however, also have some potential for growth in terms of new activities. Vocational education for adults, both the employed and the unemployed, is receiving support from the DES and the MSC. Pump-priming funding is being made available for a series of linked initiatives such as PICKUP and the Local Collaborative Projects. In some authorities the potential contributions made by vocational FE to economic development and regeneration are being actively promoted. In addition the skills, resources and experience of FE can be relevant and saleable to overseas governments and companies on a full-cost basis, thus generating and sustaining levels of service.
34. The third broad strand, that of general education, makes provision for school-leavers and adults, though primarily for the former. Whilst it is also liberal and non-vocational in its character the primary purpose is generally examination orientated and directed towards entry to higher education. As such a substantial element of provision is the FE alternative to the school sixth form and therefore both competitive and set in a politically sensitive area. In that there is a strong relationship to entry to HE there also tends to be cause-and-effect ripples as competition has heightened for HE places in a period of change. This national characteristic is likely to be followed locally by pressures for structural review as secondary re-organisation brings sixth form provision into focus in a period of falling rolls.
35. As with vocational education, it is possible to set emerging strategies alongside the identification of major pressures. Access courses designed to support adult entry into HE have been established and consideration is being given to the development of new forms of delivery systems, including open learning packages. In that these are likely to serve the needs of adult students, it is probable that they will enter into market areas which are generally new to the colleges. There will, however, be a need to ensure that operational systems and resource implications are designed from the outset to support continued activity and not merely become high-cost short-lived experiments.
36. The fourth element of non-vocational, liberal adult education has largely been developed by agencies other than the colleges across the City. In addition to the full-time adult education centres, part-time institutes based on schools make extensive provision. Community schools have been established and are to grow rapidly. In addition to the LEAs agencies the responsible bodies of the University and the Workers Educational Association are also strong providers. The City Council's policy of active promotion of the community role of its secondary schools can be expected to become a major thrust in this area - the part to be played by the colleges is not as yet clear.
37. Competition is, therefore, again clearly a potentially significant characteristic of the future in both the private and the public sectors. The so-called leisure industry is becoming a reality as it develops in an ad hoc way. The traditions of private tuition in areas such as dancing and learner-driver instruction are being expanded in the commercial sector, notably in relation to keep fit and sports. In the voluntary sector, the traditionally wide variety

of activities has been strengthened by grand-aid and the appointment of community workers and is increasingly looking towards formal group learning activities as an area of expansion.

Conclusion

38. Forecasting is, as has been stated, more of an art than a science, the form of which, like beauty, may lie in the eye of the beholder. There does not appear to be a strong tradition of critically analysing trends in non-advanced FE, perhaps because in a period of expansion in terms of both resources and recruitment, the need was not perceived of as being acute. It is not, therefore, possible to be certain whether the apparently unprecedented changes and stresses referred to in this paper are fair reflections of reality or simply novel perspectives - new ways of seeing what has always, or almost always, been there. It is likely both may be true, in part at least.
39. Straw polls of opinion would seem to indicate a general consensus that the scale and pace of change is both quicker and more wide-ranging than that previously experienced by managers in the FE system. The 1960s and early 1970s can be shown to have been primarily concerned with expansion, a position exemplified by the FE building programme. From the mid 1970s on the pattern changed from one of continued growth, related largely to the bulge of 16 to 19 year olds to patterns associated with stop-go policies in terms of resources. This phase could now also be passing as the FE system transits into different dimensions which may be characterised by declining student numbers, tightening resources, pressure for great efficiency and growing competition on many fronts.
40. This paper has attempted to do little more than present an argument for forecasting as a means of heightening awareness and looking ahead. Some measure of overview has been tried through an exploration of what may be important characteristics. There is, however, a need to formulate hypotheses more clearly, to collate data and to question its use. In the absence of study and debate in depth it may be all too easy to regard a collection of opinions as being potentially Delphic, or of statistics as offering a normative base for sound projections. This paper thus far has endeavoured to begin an approach through the first methodology. The section that follows adopts the DES Statistical Bulletin 12/83 as the basis for a case-study using the second. Whilst both assist in shifting perspectives from the present to the future they are only beginnings.

PART THREE : A CASE STUDY

16 to 19 Age Group : Participation Rates and Socio-Economic Characteristics

A Summary of DES Statistical Bulletin 12/83 in Relation to Liverpool

Introduction

41. The Department of Education and Science published its latest analysis of staying-on patterns in 1983. Statistically significant relationships

between staying-on and a range of socio-economic characteristics was identified for local authority areas.¹⁷ These notes summarise the findings with regard to Liverpool as identified in the DES Statistical Bulletin 12/83.

Background

42. The collation of data at national level by the DES has provided a basis for exploration of trends over time, and the exploration of statistical relationships that may highlight factors, either directly or by proxy, that relate to participation levels. Findings are available for the five-year period from 1976-77 to 1980-81 and whilst participation rates vary nationally and locally one indicator, the ratio of non-manual to all household heads was found to be the major common factor. Termed the socio-economic indicator the factor was defined as accounting for 60 per cent of the differences between LEAs in staying-on rates of 16 to 19 year olds in full-time education in schools and colleges, rising to over 70 per cent for GCE and CSE courses.
43. Perhaps surprisingly the analysis found no relation in the period up to 1981 between staying-on rates and unemployment level amongst young people. The only other element found to be of major significance was the proportion of non-white and non-UK-born young people in the area, accounting for between 5 and 10 per cent of the inter-authority variations. Whilst the analysis did not identify any factors related to differences in part-time study levels it is likely that in the period covered, ie. prior to the development of 21 hour courses, differences would have related to employment patterns and part-time day release traditions. Since that period the Youth Training Scheme has also become a significant characteristic.

Participation Rates in Liverpool : 1980-81

44. 16 year olds : The overall staying-on rates in schools and colleges of 16 year olds in 1980-81 was 32.6 per cent of the age group placing Liverpool 86th in the rank order of the 96 LEAs in England. As the table below indicates this ranking is based on substantive provision made in the schools sector rather than in the Further Education colleges.

16 Yr. Olds in Full-Time Education in Liverpool		
Provision	Percentage	Rank Order
Schools	21.1%	67th
FE All courses	11.5%	77th
FE GCE/CSE	2.8%	62nd
FE Other	8.7%	80th
Total	32.6%	86th

Participation rates in schools in the 21 LEAs in Greater London tend to be exceptionally high and if they are excluded Liverpool is in 66th position in the rank order of the remaining 75 authorities. Part-time day FE enrolments at a further 11.6 per cent placed Liverpool in 34th place and the balance of the remainder of the 16 year old population at 55.8 per cent places the LEA at 84th position, the other LEAs ranging from 33.8 to 62.7 per cent.

45. At the national level the DES reported increases from 37 to 39 per cent of 16 year olds participating full-time from 1978-79 to 1980-81. Part-time study levels however decreased over the same period. Analysis to date in Merseyside suggests a similar pattern in terms of a small increase in the Age Participation Rate for full-time students.
46. 16-19 year olds : The Statistical Bulletin provides a parallel analysis covering the three year age group. Staying-on rates are again low and the LEA remains in the lowest quartile, notably in terms of vocational courses provision is largely based on City and Guilds and BTEC courses. The table below summarises the position for the overall age group :

16-19 Yr. Olds in Full-Time Education in Liverpool		
Provision	Percentage	Rank Order
Schools	12.4%	65th
FE All courses	7.6%	84th
FE GCE/CSE	2.3%	67th
FE Other	5.3%	84th
Total	19.9%	81st

47. The staying-on rates in the Authority can be seen to be ranked amongst the lower levels nationally but comparable with other Northern Metropolitan LEAs with similar socio-economic backgrounds (see the graph in Appendix A). In the area of GCE/CSE courses the FE sector can be seen to be a minor provider, however, when set alongside the school sixth forms. Part-time participation in FE at 12.1 per cent of the age group, however, ranks 55th of the 96 LEAs and the balance of 68.0 per cent who form the remainder of the 16-19 year olds place the LEA 11th in that rank order.
48. Socio-Economic Structure : The socio-economic grouping of the head of the household is taken to reflect both social class and economic level. The 1971 Census of Population was used in Statistical Bulletin 15/79 and further criteria were taken from the 1978 National Dwelling and Housing Survey, the DES survey of school meals provision (1979) and unemployment rates kept by the Department of Employment. In terms of the critical dimension of the socio-economic factor Liverpool ranked 69th of the 96 LEAs and 51st when the LEAs in the Greater

London area are excluded. For the second factor, the percentage of non-white and non-UK-born young people, the level is only 3.5 giving a ranking of 65th of the 96 LEAs.

Trends

49. Whilst the DES has identified a strong statistical correlation across the country between the socio-economic structure and participation levels, the the position in Liverpool would appear to point to staying rates below those which may have been expected. The LEA ranked 81st in the DES statistics for its level of full-time study across the 16 to 19 age group and 80th for the 16 year old age cohort whereas the ranking for the major social characteristic was 69th, and 65th for the supplementary characteristic.
50. The recent research by the DES has confirmed its earlier findings that variations between LEAs tend to relate strongly to socio-economic characteristics. Whilst it is nevertheless possible that LEA or institutional policies and management action can also influence outcomes it is not clear whether these shifts will relate to variations within overall participation levels or to possible increases. Given the existing unemployment levels in Liverpool and the broad differentiations between GCE/CSE work largely in schools and other courses in FE it may be that the progression of community programmes in schools will lead to a shift in the balance of types of activity and increase competition rather than raise the overall staying-on rate.
51. An analysis of Form 7 returns for the period from 1980-81 to 1983-84 has shown some measure of rise in the staying-on rate in schools both for one-term and longer courses.¹⁸ The table below identifies the position as at January in each year for the schools sector. It should, however, be noted that the returns operate from birth dates which differ from the academic year and this may have an effect on year-on-year variations.

School Sixth Form Participation Rates		
Year	Sixteen Year Olds	Participation Rate
January 1980	1,987	21.7%
January 1981	1,932	20.7%
January 1982	2,144	25.1%
January 1983	2,079	26.0%
January 1984	2,331	29.3%

Reports in the educational press suggest that the pattern outlined above has been found elsewhere and it has been suggested that the rises may in part relate to growing consciousness of the structural nature of youth unemployment. Reports on in-depth analysis are likely to have to wait for future statistical Bulletins, youth unemployment is not, however, a recent phenomenon in Merseyside.

52. Further education returns are based on the 1st November returns which are institution-based and contain extra-district enrolments, the latter being significant in Liverpool. The general pattern, however, follows that outlined above in relation to overall growth in numbers in line with the growth in the size of the age cohort, and the likelihood of some limited measure of growth in Age Participation Rate for full-time students. The part-time pattern has been substantially affected by the YOP/YTS programme and the efforts of the Colleges in providing for the young unemployed. The records again, however, relate to birth dates in terms of a single point snapshot which does not coincide with the start of the academic year in this instance the 1st November rather than January.

FE Enrolments : 16 to 19 Yr. Olds		
Year	Full-Time Nos.	Part-Time Nos.
November 1979	3,112	7,453
November 1980	3,149	6,286
November 1981	3,449	6,343
November 1982	3,697	6,537
November 1983	3,653	6,771

53. The overall size of the key age group of 16-19 year olds has just passed its peak in Liverpool and the effects of falling rolls will be increasingly felt over the next few years. The scale of reduction in the age cohort over a ten-year period will be significant and whilst year-on-year changes are relatively small given the participation of only a proportion rather than all of the year group the cumulative effect will nevertheless be substantive.

Falling Rolls in Liverpool : The 16 Yr Old Cohort		
Year	Population	Proportion
January 1978	9,480	+ 25%
1979	9,205	+ 22%
1980	9,041	+ 20%
1981	8,537	+ 13%
1982	7,957	+ 5%
1983	7,713	+ 2%
1984	7,565	=
1985	7,626	+ 1%
1986	7,459	- 1%
1987	7,358	- 3%
1988	6,531	- 14%
1989	5,962	- 21%
1990	5,433	- 28%
1991	5,267	- 30%
1992	5,115	- 32%
1993	4,910	- 35%

54. The overall participation rates will clearly be critical as participation in full-time education after the age of sixteen is voluntary. Under present forms of provision and regulations the existing level of participation in Liverpool is already low in comparison with other LEAs, and low in relation to the key indicators identified by the DES. Claims or hopes for substantive rises to offset the falling rolls can be shown arithmetically to have to be of increasingly unprecedented proportions if the effects are to be significant. In the period from 1981 there has been the continued rise in youth unemployment, the promotion of 21 Hour courses in FE, YOP and now the Youth Training Scheme and courses developed in schools for new sixth formers. How far the latter, and the new community role will represent a sharpening of competition between schools and FE for the same group of students rather than an expansion of the areas of recruitment remains to be demonstrated. The findings of Statistical Bulletin 12/83 do not speculate on the future but nevertheless may be taken as an indication that provision to date has sustained but not significantly extended participation levels. Existing differences between LEA staying-on rates do not point to any factors amenable to management and promotion by LEAs or their schools and colleges.
55. The birth rate for sixteen year olds is known now to the end of the millenium and shows no substantial increases over the lowest point of the trough which will be reached in the next decade. Furthermore, whilst the effects of immigration and emigration cannot be predicted in detail, experience in recent years would again point to some measure of net loss in the size of the key age group for recruitment. (16 to 19 year olds forming around two-thirds of the full-time equivalent student numbers in colleges and all of the sixth form pupils in schools) When account is also taken of the rapid reinforcement of trade barriers by neighbouring LEAs with increasing spare capacity and the role of industry and of the voluntary and private sectors in YTS off-the-job training there is a clear need now to undertake careful market analysis and future planning.

PART FOUR : CONCLUSION

General Observations

56. Few are likely to disagree with the assessment made by the principal FE teachers' trade union, NATFHE, when it argued in opening its review of future trends in F and HE that

"At perhaps no time in the past has Further and Higher Education faced such a watershed as that which it faces at the present time." 19

Whilst opinions differ as to the primary causes it is nevertheless clear that expanding and developing forms of provision for 16 to 19 year olds are competing for a reducing age cohort in a period when national and public finances are being held under continuing scrutiny.

57. Experience drawn from expansionism or stop-go policies may not be of full relevance to the 1980s and 90s if the trends forecast at the national level are deemed to apply locally. The shift towards centralism identified by Stevenson would reinforce the view that locally administered FE provision can no longer be insulated from national trends.²⁰ Forecasting has at best a chequered history in the open and volatile environment of post-sixteen educational provision, swinging as it has done from pious hopes to harsh economic realities. In a period of change it cannot easily be ignored and a recognition of the broad trends would seem to be both appropriate and reasonable.
58. One of the few characteristics of the years ahead that may be predicted with any certainty is the view held that Non-Advanced FE as currently resourced and structured will come under increasing pressure. Opinions will clearly differ as to the focus of priorities, reflecting in part at least the roles and interests of those advocating particular arguments. Existing participants can be expected to follow arguments put forward as falling rolls passed through the schools sector, though with variations here of meeting new needs as well as maintaining or enhancing the unit of resource for existing students. Historical analysis and comparative studies may assist here in assessing experience at home and potential identified elsewhere as a basis for extrapolating forwards. Further Education is, however, but one part of a complex public service which is being provided both nationally and locally, the resourcing of which in a period of contraction and competition places it clearly in the political arena.
59. To argue that

"There is a wide range of social, economic and educational determinants of access and demand for educational opportunities for the 16+ population in this country over the next 20-10 years"

may now seem a statement of obvious significance. It would not always have been held as such a few years ago. To go on, however, to argue that

*"Of these, the contraction of the size of a particular age group is only one, and not necessarily the most significant factor"*²¹

is unlikely to be such a universally held view. History shows that the greater part of the experience, skills and resources of the providers of NAFE are linked to that age group, that the expectations of society have settled for generations on that age group and that this pattern is typical of many developed countries and not merely of each college and LEA in this country.
60. Central to arguments of access and demand are political issues arising from values that underpin any needs-led debate. It is not, however, possible to surmise on what may be in a vacuum. Any radical changes in possible patterns of participation have to question whose needs are being expressed and how far current

providers and their offerings may be seen as being relevant and acceptable in competing for support from new students in viable numbers. At the same time, it has to be recognised that the FE system is not free but is dependent on the expenditure each year of over £1,250 million of public monies. The cost implications are also of paramount significance and recent research has identified wide variations in current practice. Just as it is, therefore, possible to look to new student groups expressed through needs in terms of age, sex balance or technological change it is also possible to model variations in terms of resources.

61. The following examples illustrate possible options, each with differing implications for public expenditure and recruitment:

- (i) Maintain existing unit costs and reduce expenditure in line with falling rolls
- (ii) Maintain existing unit costs and expenditure levels by expanding new areas of participation
- (iii) Maintain expenditure levels, reduce levels of service in line with falling rolls but increase unit costs
- (iv) Reduce unit costs, expenditure levels and participation, the latter in line with falling rolls, or
- (v) Reduce unit costs and expenditure levels but increase participation through rises in efficiency and effectiveness

Whilst the first can be said to reflect status quo with FE cast in a reactive role, the fourth option can be said to be broadly in line with the government's published expenditure plans. Unless the findings of the recent action research undertaken by the District Audit Service on behalf of the Audit Commission are shown to be fundamentally flawed, the fifth option may also be increasingly seen as being feasible.

62. Analyses of recent patterns of participation as well as of resource usage have pointed to the significance of the 16 to 19 age group, particularly on full-time courses in NAFE. To look solely to falling rolls as the critical change factor is clearly over-simplistic, but so too would be any attempt at under-estimating the effects of growing competition for the smaller numbers of potential students on existing types of activity. The pattern of recent years has shown only limited growth in the Age Participation Rates, and of major shifts by colleges into new markets. The one-third of young people who have not previously looked to education after the age of sixteen are unlikely to do so now. Furthermore, preliminary studies are beginning to highlight major cost differentials between training experience with employers, sixth form education and college courses. 22
Any shifts to equalise student finances can only serve to exacerbate the already substantive variations in cost per student place.

63. To endeavour to extrapolate from historical findings casts the FE service in a reactive rather than a pro-active role. The spur of imposed change may generate substantive changes in working practices and promote the aggressive marketing role highlighted by the Audit Commission²³ and seen as vital in the vocational sector by Cassels.²⁴ Structural changes are most quickly achieved, however, by national dictat, "The Training for Jobs" White Paper providing but one example.²⁵ The implications for FE provision, however, are far from clear and may become even less so if the outline of a two year pre-vocational training scheme given by Geoffrey Holland is of any guidance.²⁶ The outcomes to date for colleges of the Youth Training Scheme are already somewhat different from those originally predicted only a few years ago.
64. In its report published in 1981 the MacFarlane Committee recognised the need to challenge traditional wisdoms and institutional roles. School closures and mergers are being paralleled by the re-organisation of FE structures by some LEAs in pursuit of more flexible and effective units. Whilst there can be little detailed certainty in proposing participation levels expressed in terms of pre-vocational, vocational, general and non-vocational further education, it is possible to draw out simple linear projections and high and low variants.

Extrapolations from Existing Enrolment Levels

65. The following model of participation endeavours to respond to the key factors of demographic change and constraints on public expenditure in producing a base line. Consideration is then given to possible variations relating to examples of other factors. The 1983 FESR is taken as a recent baseline measure of current provision and is initially projected forward on an assumption that existing participation levels will be maintained.
66. Upper and lower variants are based on the possible impacts of changes relating to levels of student recruitment. Rises may be achieved by increases in the participation of 16 to 19 year olds relating to 17+ recruitment, by the transfer of the Adult Education Centres to the colleges and/or the long term effectiveness of the EEC funded initiatives. On the other hand there is little indication of improvement in employment or growth in vocational education. Reference has already been made to the growing competition in the pre-vocational sector from public, private and voluntary providers. The projected community roles for schools will also provide a major competitive element to colleges in relation to non-vocational provision.
67. In the examples tabulated below the first position adopts the 1983 FESR as its starting point and assumes the maintenance of the current Age Participation Rates for 16 to 19 year olds and status quo overall for adult students. In the second and third options growth and decline of 2 per cent per annum, based on the previous year's enrolments has been assumed over and above the decline due to falling rolls in order to illustrate the possible cumulative effects of the types of influence outlined above. The choice of 2 per cent over the next decade is arbitrary, similar calculations could be undertaken for 1 or 3 per cent in the absence of detailed research.

Projections of Future Enrolment Levels			
Year	Medium Level	Low Level	High Level
November 1983	7389 FTE	-	-
1984	7241	7389	7093
1985	7315	7461	7169
1986	7167	7313	7021
1987	7019	7162	6876
1988	6205	6345	6065
1989	5687	5811	5563
1990	5169	5283	5055
1991	5021	5124	4918
1992	4873	4973	4773
1993	4651	4748	4553

68. At the end of the decade the level of Full-Time Equivalent students can be seen on the above projections to have fallen to 62 per cent at the lowest point, 63 per cent on the basis of falling rolls and the maintenance of the Age Participation Index or 64 per cent if gradual growth is achieved year-on-year. Whilst it is unlikely that post 19 provision will have such a direct linear relationship to that made for younger students it can nevertheless be assumed that reductions in provision will have knock-on effects and should not be discounted.
69. If, on the other hand, the November 1983 enrolment levels are regarded as a level of service to be sustained with the effects of falling rolls being off-set by growth elsewhere it is possible to calculate alternative projections. There again the variables are numerous and pose problems for selection in modelling alternatives, the approach adopted here only being intended to be illustrative of a range of options. Taking the current pattern of distribution of enrolments by the major modes of attendance it would be necessary to achieve the following levels of expansion from the 1983 position if overall participation is to be sustained a decade later. Enrolments would have to rise by:
- 68 per cent of Full-Time students or
 104 per cent of Part-Time Day students or
 617 per cent of Evening Only students
- or a combination of the modes.
70. The Full-Time mode of attendance currently caters primarily for younger students continuing their education after school and unless there are major legislative changes this is unlikely to be a major growth area. Part-Time provision in the vocational sector is becoming increasingly competitive but the implementation of a two year training programme replacing the Youth Training Scheme may increase college-based activities. It is, however, in the post 19 general and non-vocational sectors that the potential population is the largest. It is here, however, that participation patterns tend to be limited - as illustrated by Evening Only levels. Study of successful provision elsewhere and of potential parallels in Liverpool may be advisable in exploring this option.

71. An over-simple distinction was drawn earlier between re-active and pro-active roles for colleges which did not recognise either an assessment of present position or of potential for the future. Whilst no assessment has been attempted it is clear from recent history the current situation reflects varying levels of individual and corporate activity which needs to be evaluated as a critical dimension of both the present and the future.
72. Set alongside the two key dimensions of potential areas of growth in terms of need/demand and institutional response/access there is also a further critical dimension that relates to both attitudes and expectations and to implementation. This latter dimension of financial resources or constraints will also need to take account of funding mechanisms in terms of access and distribution. Comparative studies of unit costs in Liverpool and elsewhere may again contribute towards a more dynamic, pro-active role in utilising, forecasting as a contribution to reviewing the present and setting policies for the future.

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Chart 1 : Percentage of the 16 year old population participating in full-time and sandwich education (1980-81)

• Metropolitan
• Non-metropolitan

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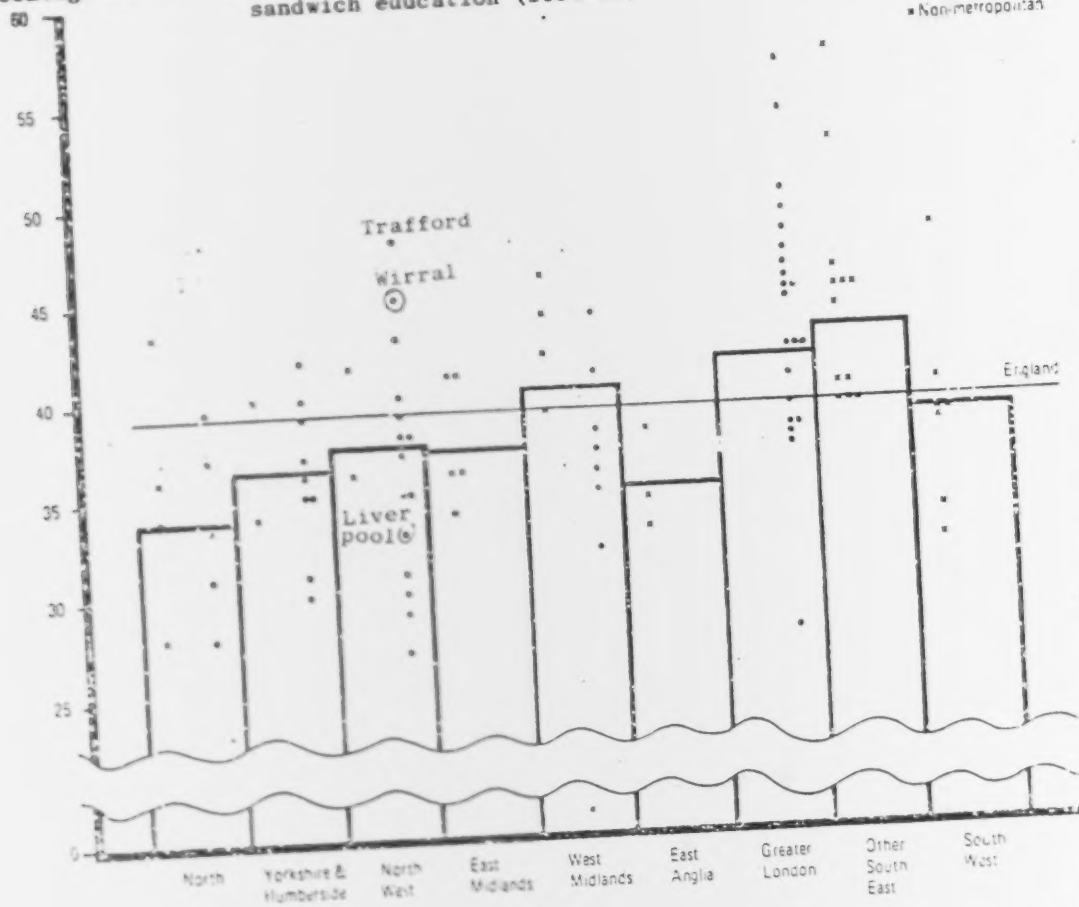


Chart 2 : Percentage of the 16-19 population participating in full-time and sandwich education (1980-81)

• Metropolitan
• Non-metropolitan

